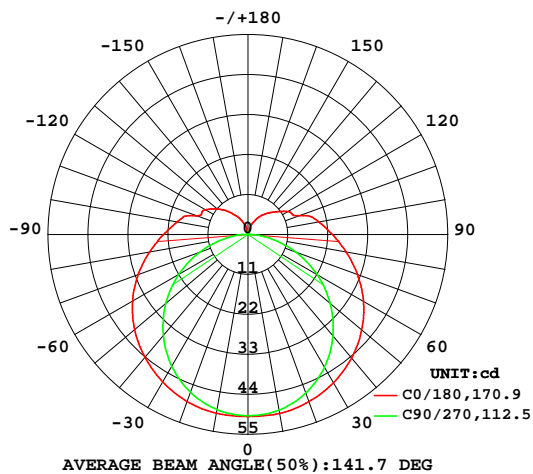


LUMINAIRE PHOTOMETRIC TEST REPORT

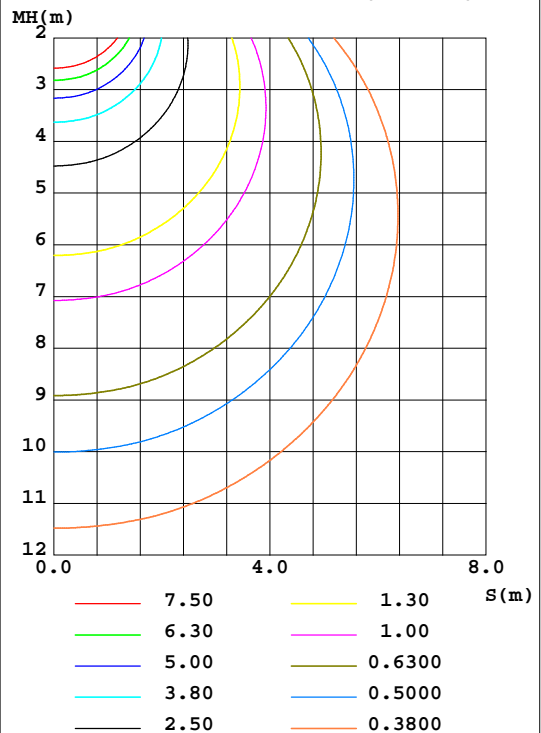
Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 25.85 lm/W			
MODEL	NNS1224	I _{max} (cd)	50.07	S/MH(C0/180)	1.41
NOMINAL POWER(W)	8	LOR(%)	100.0	S/MH(C90/270)	1.25
RATED VOLTAGE(V)	24	TOTAL FLUX(lm)	228.94	h UP,DN(C0-180)	9.0,40.9
NOMINAL FLUX(lm)	228.938	CIE CLASS	SEMI-D.	h UP,DN(C180-360)	9.3,40.9
LAMPS INSIDE	1	h up(%)	18.3	CIBSE SHR NOM	1.50
TEST VOLTAGE(V)	24	h down(%)	81.7	CIBSE SHR MAX	1.50

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

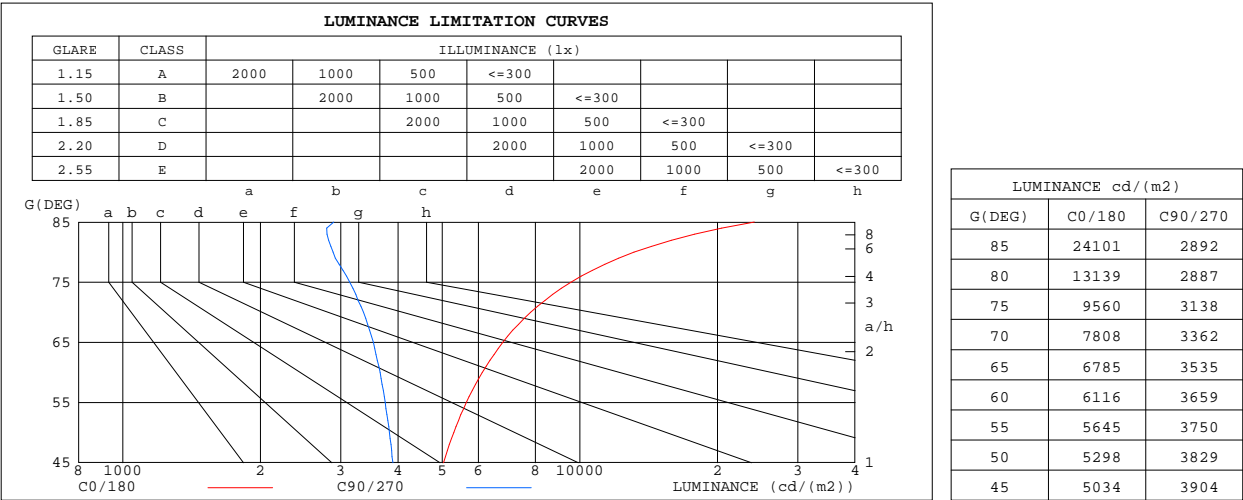
g	C0	C90	C180	C270					g	F zone	F total	%lum,lamp
10	50.02	49.08	49.94	48.94					0~ 10	4.748	4.748	2.07,2.07
20	48.98	46.44	48.92	46.22					10~ 20	13.77	18.52	8.09,8.09
30	47.07	42.17	46.86	41.91					20~ 30	21.32	39.84	17.4,17.4
40	44.36	36.44	44.13	36.22					30~ 40	26.62	66.47	29,29
50	40.86	29.54	40.73	29.53					40~ 50	29.21	95.68	41.8,41.8
60	36.70	21.95	36.68	22.01					50~ 60	28.93	124.6	54.4,54.4
70	32.05	13.80	32.13	13.98					60~ 70	25.95	150.6	65.8,65.8
80	27.38	6.016	27.45	6.310					70~ 80	20.95	171.5	74.9,74.9
90	23.25	1.119	23.27	1.526					80~ 90	15.60	187.1	81.7,81.7
100	19.91	0.1739	19.90	0.1500					90~100	12.02	199.1	87,87
110	15.25	0.2897	15.17	0.2060					100~110	9.704	208.8	91.2,91.2
120	12.74	0.3992	13.61	0.3154					110~120	7.042	215.9	94.3,94.3
130	9.743	0.4830	11.02	0.3988					120~130	5.471	221.4	96.7,96.7
140	7.418	0.5666	8.113	0.4904					130~140	3.715	225.1	98.3,98.3
150	5.213	0.6438	5.550	0.5754					140~150	2.253	227.3	99.3,99.3
160	2.995	0.7726	3.277	0.6888					150~160	1.145	228.5	99.8,99.8
170	0.8180	0.8949	1.107	0.8265					160~170	0.3858	228.9	100,100
180	0.7725	0.9206	0.7468	0.9142					170~180	0.0823	228.9	100,100
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

LUMINANCE LIMITATION CURVES

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



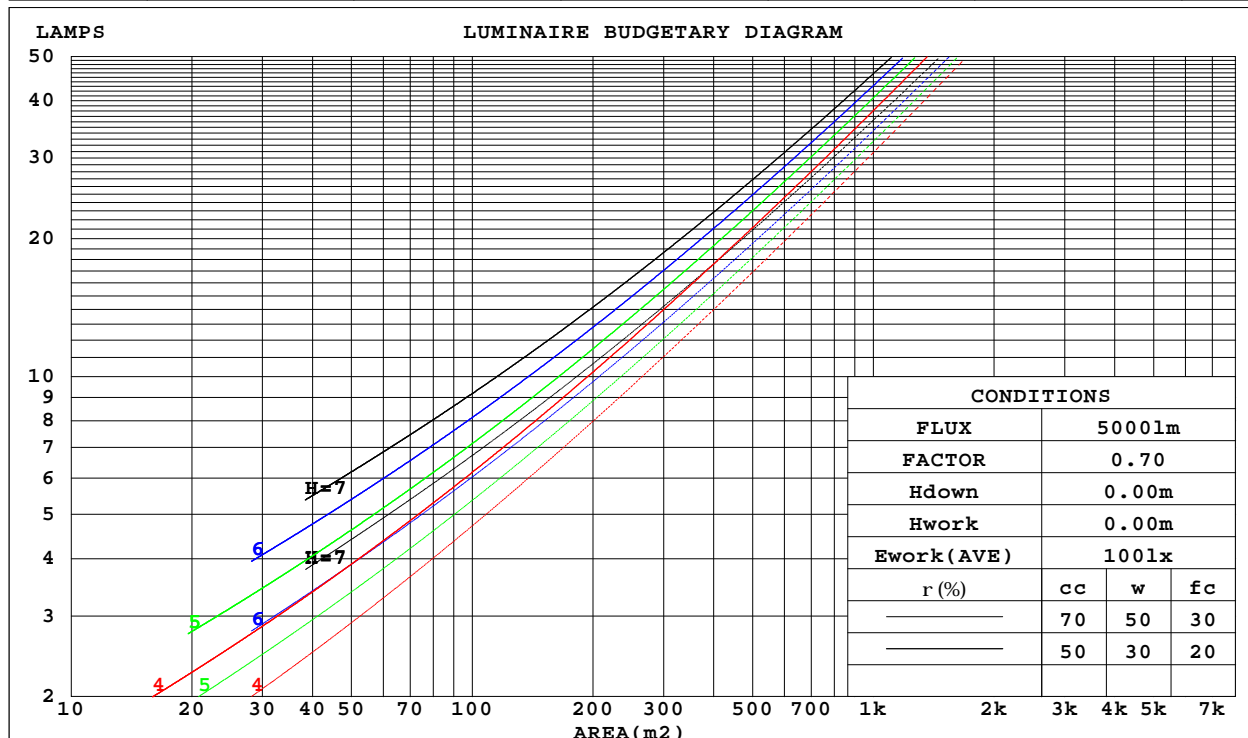
C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

r _{cc}	80%			70%			50%			30%			10%			0
r _w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
r _{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.15	1.15	1.15	1.10	1.10	1.10	1.01	1.01	1.01	.93	.93	.93	.85	.85	.85	.82
1.0	.96	.91	.86	.92	.87	.83	.84	.80	.77	.77	.74	.71	.71	.68	.66	.63
2.0	.82	.74	.68	.79	.72	.66	.72	.66	.61	.66	.61	.57	.60	.57	.53	.50
3.0	.71	.62	.55	.68	.60	.54	.63	.56	.50	.57	.52	.47	.53	.48	.44	.41
4.0	.63	.53	.46	.60	.51	.45	.55	.48	.42	.51	.45	.40	.46	.41	.37	.34
5.0	.56	.46	.39	.53	.45	.38	.49	.42	.36	.45	.39	.34	.42	.36	.32	.29
6.0	.50	.40	.34	.48	.39	.33	.44	.37	.31	.41	.34	.29	.37	.32	.28	.25
7.0	.45	.36	.30	.43	.35	.29	.40	.33	.27	.37	.31	.26	.34	.29	.24	.22
8.0	.41	.32	.26	.39	.31	.25	.36	.29	.24	.34	.28	.23	.31	.26	.22	.20
9.0	.37	.29	.23	.36	.28	.23	.33	.26	.22	.31	.25	.21	.29	.23	.20	.17
10.0	.34	.26	.21	.33	.26	.20	.31	.24	.19	.29	.23	.19	.27	.21	.18	.16



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

WEC AND CCEC

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

rcc	80%	70%	50%	30%	10%	0
rw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
rfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Wall Exitance Coefficients(WEC)					
0.0						
1.0	.377 .214 .068	.364 .208 .066	.340 .195 .062	.318 .183 .059	.298 .173 .056	
2.0	.329 .180 .055	.317 .175 .054	.295 .164 .051	.276 .155 .048	.257 .145 .046	
3.0	.293 .156 .047	.283 .151 .046	.263 .143 .043	.245 .134 .041	.228 .126 .039	
4.0	.264 .137 .040	.255 .133 .039	.237 .126 .038	.221 .119 .036	.205 .112 .034	
5.0	.241 .123 .036	.232 .119 .035	.216 .113 .033	.201 .106 .032	.187 .100 .030	
6.0	.221 .111 .032	.213 .108 .031	.198 .102 .030	.185 .096 .028	.172 .090 .027	
7.0	.204 .101 .029	.197 .098 .028	.183 .093 .027	.171 .088 .025	.159 .083 .024	
8.0	.189 .092 .026	.183 .090 .025	.170 .085 .024	.159 .080 .023	.148 .076 .022	
9.0	.176 .085 .024	.170 .083 .023	.159 .079 .022	.148 .074 .021	.138 .070 .020	
10.0	.165 .079 .022	.160 .077 .022	.149 .073 .021	.139 .069 .020	.130 .065 .019	

rcc	80%	70%	50%	30%	10%	0
rw	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	50% 30% 10%	0
rfc	20%	20%	20%	20%	20%	0
RCR	RCR:Room Cavity Ratio Ceiling Cavity Exitance Coefficients(CCEC)					
0.0	.330 .330 .330	.282 .282 .282	.192 .192 .192	.110 .110 .110	.035 .035 .035	
1.0	.325 .296 .269	.278 .254 .232	.190 .175 .160	.110 .101 .093	.035 .033 .030	
2.0	.318 .273 .235	.273 .235 .203	.187 .163 .142	.108 .095 .083	.035 .031 .027	
3.0	.311 .256 .213	.267 .221 .185	.183 .154 .130	.106 .090 .076	.034 .029 .025	
4.0	.303 .244 .199	.260 .211 .173	.179 .147 .122	.104 .086 .072	.033 .028 .024	
5.0	.296 .234 .189	.254 .203 .164	.175 .142 .116	.101 .083 .069	.033 .027 .023	
6.0	.288 .226 .182	.248 .196 .158	.171 .137 .112	.099 .081 .067	.032 .026 .022	
7.0	.281 .220 .176	.242 .190 .154	.167 .133 .109	.097 .079 .065	.031 .026 .021	
8.0	.275 .214 .172	.236 .186 .150	.164 .130 .107	.095 .077 .064	.031 .025 .021	
9.0	.268 .209 .169	.231 .182 .148	.160 .128 .105	.093 .075 .063	.030 .025 .021	
10.0	.263 .205 .167	.226 .178 .146	.157 .125 .103	.092 .074 .062	.030 .024 .020	

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm											
NAME: NNS1224					TYPE:			WEIGHT:			
SPEC.:NNS1224-0G24CSS050CC0100					DIM.: 1000*12*24mm			SERIAL No.:			
MFR.: Colors					SUR.:1000*12			Shielding Angle:			
ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3	
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3	
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Room dimensions	Viewed crosswise					Viewed endwise					
x = 2H y = 2H	23.2	24.5	23.7	25.0	25.6	21.3	22.7	21.9	23.2	23.8	
	3H	25.8	27.1	26.3	27.6	28.2	22.9	24.2	23.5	24.7	25.3
	4H	27.3	28.5	27.8	29.0	29.7	23.6	24.7	24.1	25.3	25.9
	6H	28.9	30.0	29.5	30.6	31.3	24.0	25.2	24.6	25.7	26.4
	8H	29.8	30.9	30.4	31.5	32.2	24.2	25.3	24.8	25.9	26.5
	12H	30.9	31.9	31.5	32.5	33.2	24.3	25.4	24.9	26.0	26.6
4H	2H	23.7	24.9	24.3	25.4	26.1	22.4	23.6	22.9	24.1	24.7
	3H	26.5	27.6	27.1	28.2	28.8	24.2	25.2	24.8	25.8	26.5
	4H	28.1	29.1	28.8	29.7	30.4	25.0	26.0	25.6	26.6	27.3
	6H	30.0	30.8	30.6	31.5	32.2	25.7	26.5	26.3	27.2	27.9
	8H	31.0	31.8	31.7	32.5	33.3	25.9	26.7	26.6	27.4	28.2
	12H	32.3	33.0	32.9	33.7	34.5	26.1	26.9	26.8	27.6	28.3
8H	4H	28.4	29.2	29.1	29.9	30.7	25.9	26.7	26.5	27.3	28.1
	6H	30.5	31.2	31.2	31.9	32.7	26.9	27.6	27.6	28.3	29.1
	8H	31.8	32.4	32.5	33.1	33.9	27.3	27.9	28.1	28.7	29.5
	12H	33.2	33.8	34.0	34.5	35.3	27.7	28.3	28.5	29.0	29.8
12H	4H	28.4	29.2	29.1	29.9	30.6	26.1	26.9	26.8	27.6	28.3
	6H	30.6	31.2	31.3	31.9	32.7	27.3	27.9	28.0	28.7	29.5
	8H	31.9	32.5	32.7	33.2	34.0	27.9	28.5	28.7	29.2	30.1
Variations with the observer position at spacings:											
S = 1.0H	+ 0.1 / - 0.1					+ 0.1 / - 0.2					
1.5H	+ 0.2 / - 0.2					+ 0.2 / - 0.3					
2.0H	+ 0.2 / - 0.3					+ 0.2 / - 0.5					

CIE Pub.117, 228.9 lm Total Lamp Luminous Flux Correct (8log(F/F0) = -5.1)

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

UTILIZATION FACTORS TABLE

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

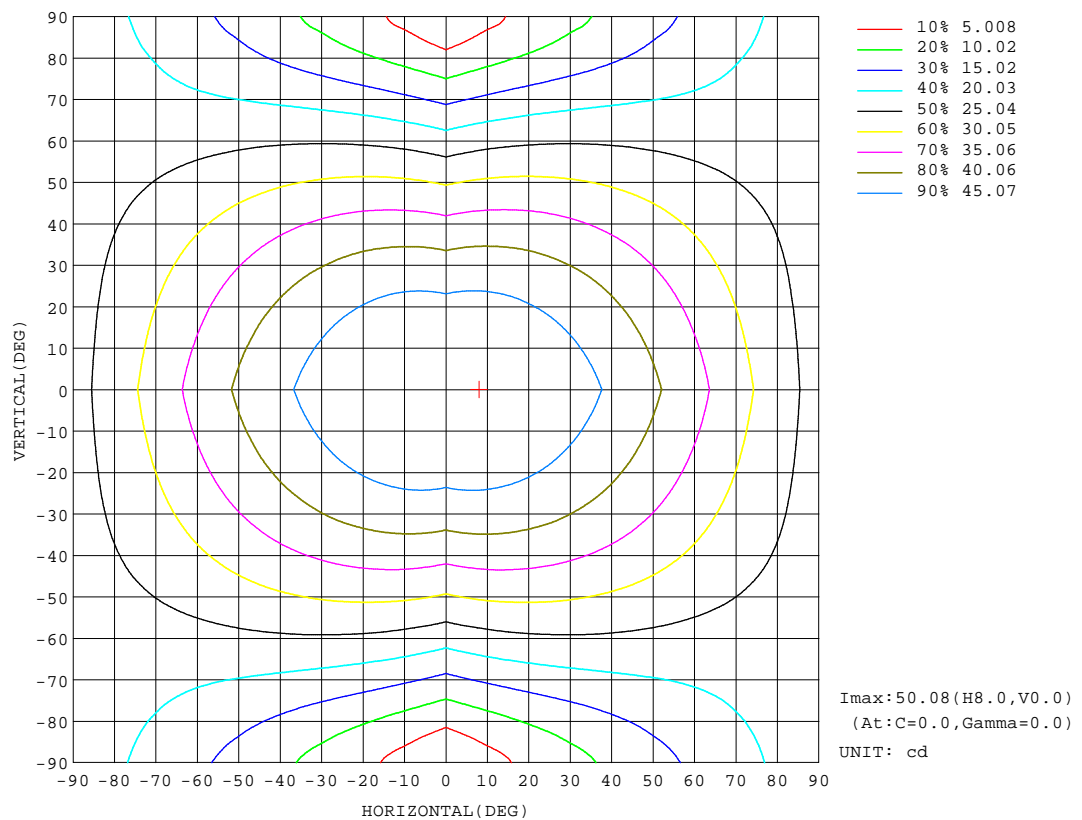
REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS(PERCENT) $k(RI) \times RCR = 5$									
k = 0.60	48	36	28	47	35	28	45	34	28	21
0.80	57	44	36	56	44	36	53	42	35	27
1.00	65	52	44	63	51	43	59	51	42	33
1.25	72	59	51	70	58	50	65	55	48	39
1.50	77	65	56	74	63	55	69	60	53	43
2.00	84	73	65	81	71	64	75	67	61	49
2.50	89	79	71	85	76	69	79	72	66	53
3.00	93	83	76	89	81	74	82	76	70	57
4.00	97	89	83	93	86	80	86	80	76	61
5.00	100	93	88	96	90	85	88	84	79	64
ROOM INDEX	UF(total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:COLORS
 Test Date:2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity:65.0%
 Test Distance:10.750m [K=1.0000]
 Remarks:

ISOCANDELA DIAGRAM

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

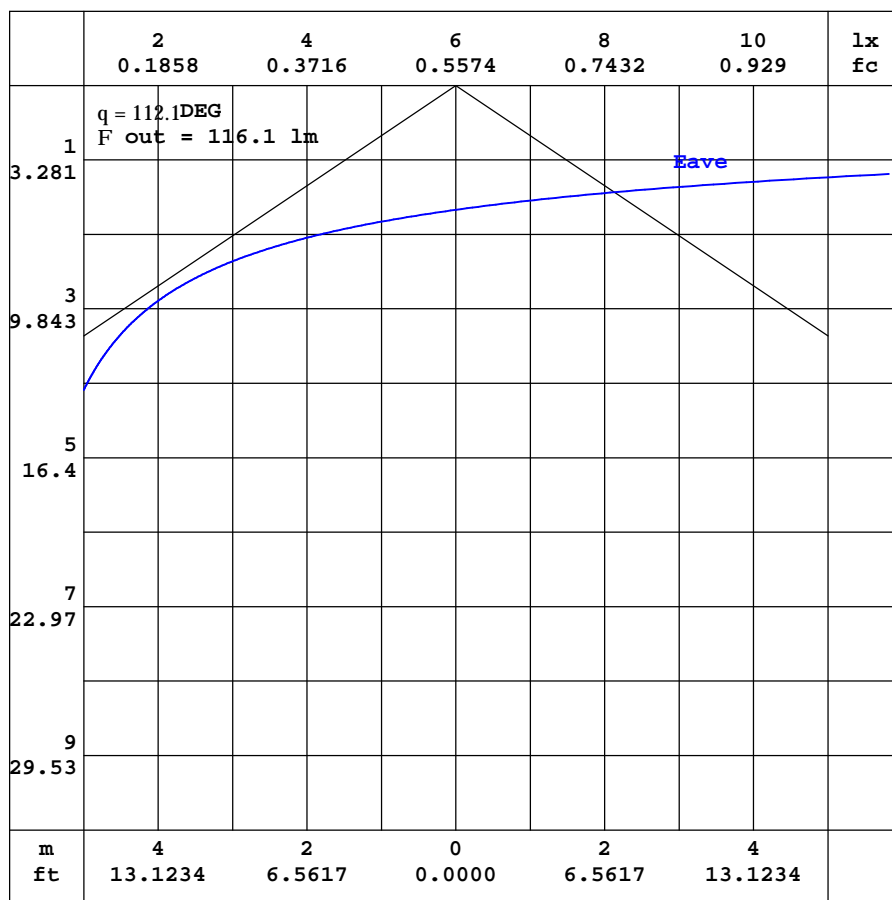


C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

Range: 0 - 180DEG
Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

AAI CURVES

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



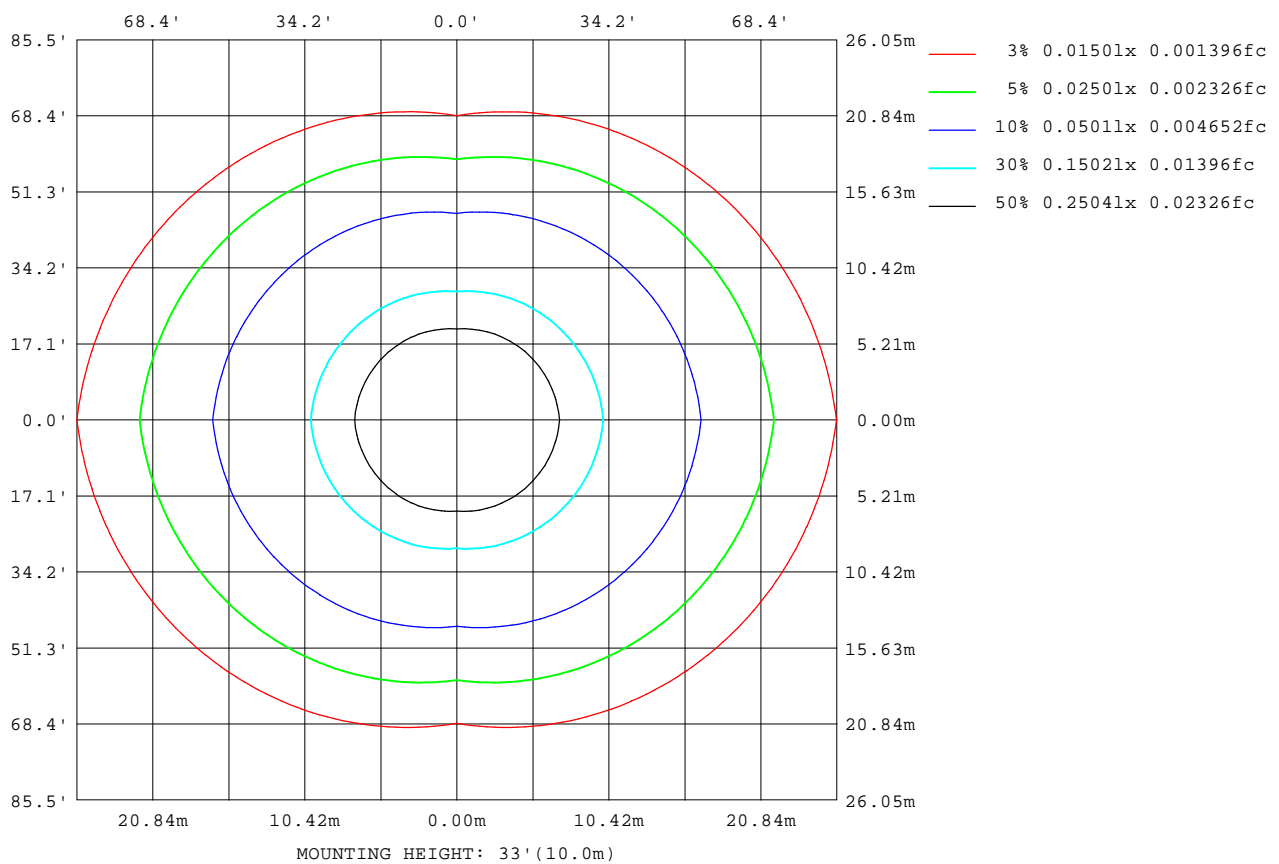
Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

ISOLUX DIAGRAM

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:



C Range: 0 - 360DEG
 C Interval: 90.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators: COLORS
 Test Date: 2019-07-01

g Range: 0 - 180DEG
 g Interval: 1.0DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
 Humidity: 65.0%
 Test Distance: 10.750m [K=1.0000]
 Remarks:

LED Avg.L Report

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

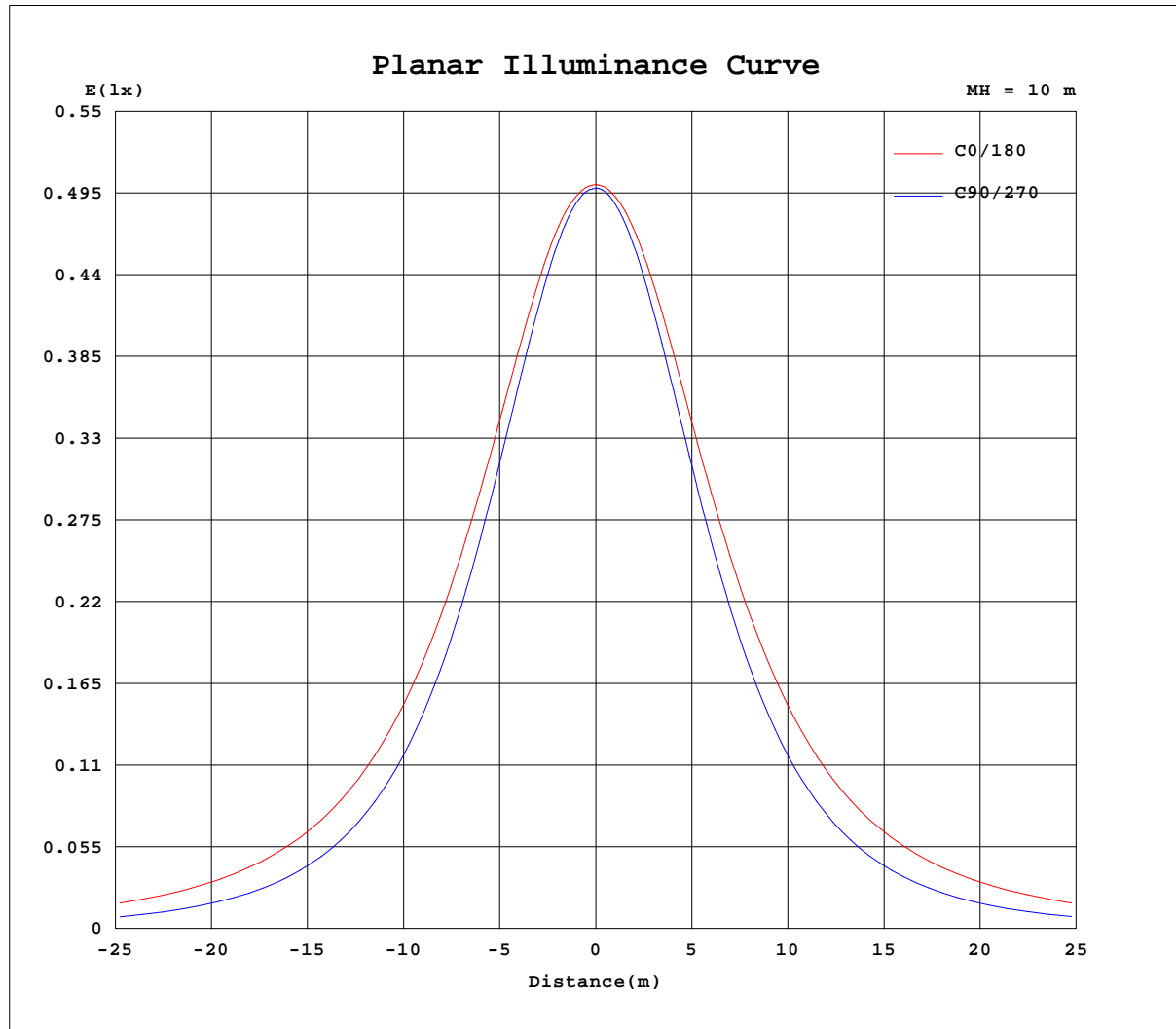
AvgL	cd/m2
L_0~180(65)av	6788
L_0~180(75)av	9574
L_0~180(85)av	24124
L_90~270(65)av	3546
L_90~270(75)av	3178
L_90~270(85)av	3066
L_45(65)av	4762
L_45(75)av	5578
L_45(85)av	10964

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators: COLORS
Test Date: 2019-07-01

g Range: 0 - 180DEG
g Interval: 1.0DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity: 65.0%
Test Distance: 10.750m [K=1.0000]
Remarks:

LUMINOUS DISTRIBUTION INTENSITY DATA

Test:U:24.00V I:0.3690A P:8.856W PF:1.000 Freq:0Hz Lamp Flux:228.938x1 lm		
NAME: NNS1224	TYPE:	WEIGHT:
SPEC.:NNS1224-0G24CSS050CC0100	DIM.: 1000*12*24mm	SERIAL No.:
MFR.: Colors	SUR.:1000*12	Shielding Angle:

Table--1

UNIT: cd

C(DEG) g (DEG)	0	90	180	270															
0	50.1	49.8	50.1	49.8															
5	50.1	49.7	50.1	49.6															
10	50.0	49.1	49.9	48.9															
15	49.6	48.0	49.6	47.8															
20	49.0	46.4	48.9	46.2															
25	48.1	44.5	48.0	44.3															
30	47.1	42.2	46.9	41.9															
35	45.8	39.5	45.6	39.2															
40	44.4	36.4	44.1	36.2															
45	42.7	33.1	42.5	33.0															
50	40.9	29.5	40.7	29.5															
55	38.9	25.8	38.8	25.9															
60	36.7	22.0	36.7	22.0															
65	34.4	17.9	34.4	18.0															
70	32.0	13.8	32.1	14.0															
75	29.7	9.75	29.8	9.99															
80	27.4	6.02	27.4	6.31															
85	25.2	3.03	25.3	3.39															
90	23.2	1.12	23.3	1.53															
95	21.5	0.21	21.5	0.14															
100	19.9	0.17	19.9	0.15															
105	18.4	0.23	18.5	0.18															
110	15.2	0.29	15.2	0.21															
115	13.4	0.35	14.1	0.27															
120	12.7	0.40	13.6	0.32															
125	11.2	0.44	12.3	0.39															
130	9.74	0.48	11.0	0.40															
135	8.54	0.52	9.60	0.46															
140	7.42	0.57	8.11	0.49															
145	6.35	0.60	6.77	0.51															
150	5.21	0.64	5.55	0.58															
155	3.89	0.71	4.47	0.64															
160	3.00	0.77	3.28	0.69															
165	1.12	0.84	2.03	0.80															
170	0.82	0.89	1.11	0.83															
175	0.77	0.91	0.75	0.89															
180	0.77	0.92	0.75	0.91															

C Range: 0 - 360DEG
C Interval: 90.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:COLORS
Test Date:2019-07-01

g Range: 0 - 180DEG
Interval: 1.0DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.362
Humidity:65.0%
Test Distance:10.750m [K=1.0000]
Remarks: